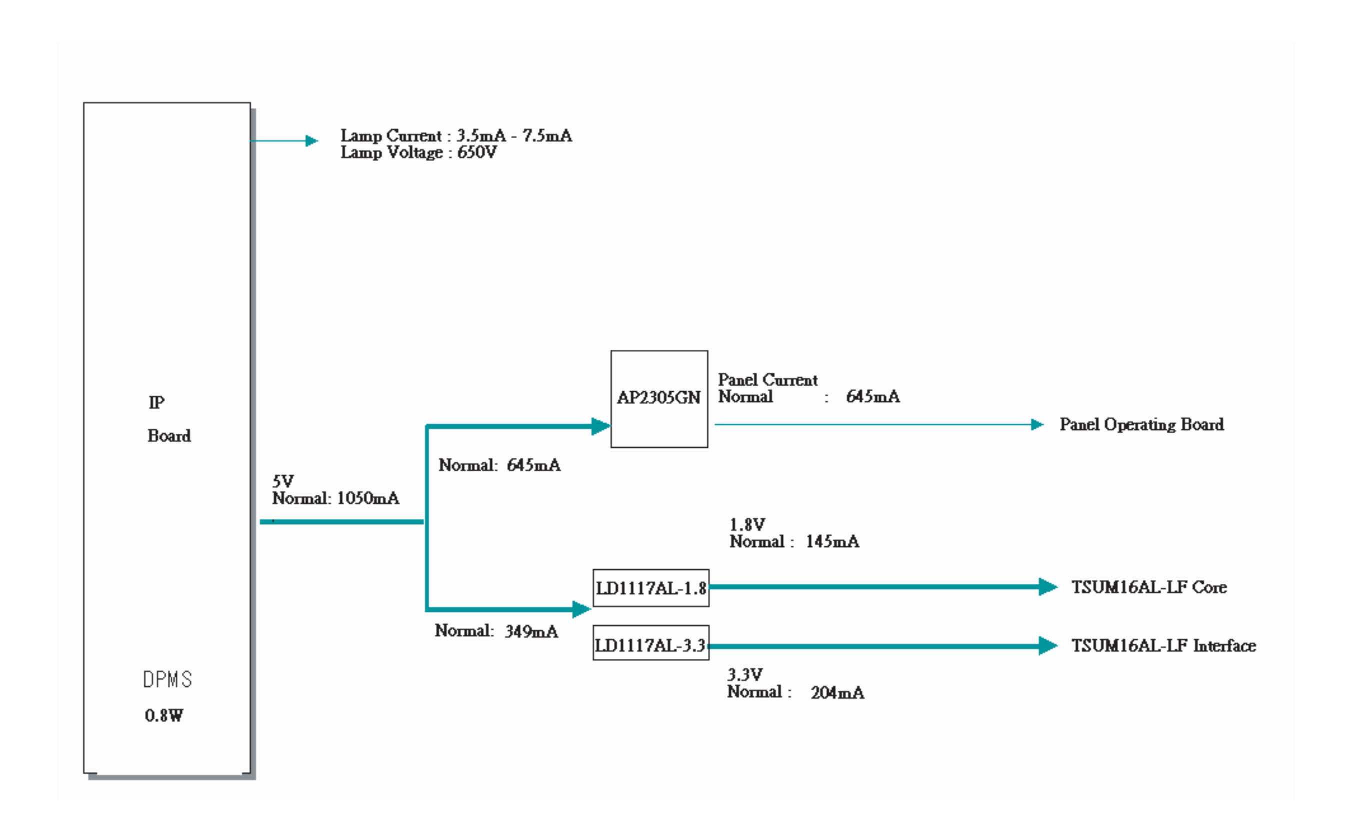
13 Circuit Descriptions

13-1 Overall Block Structure

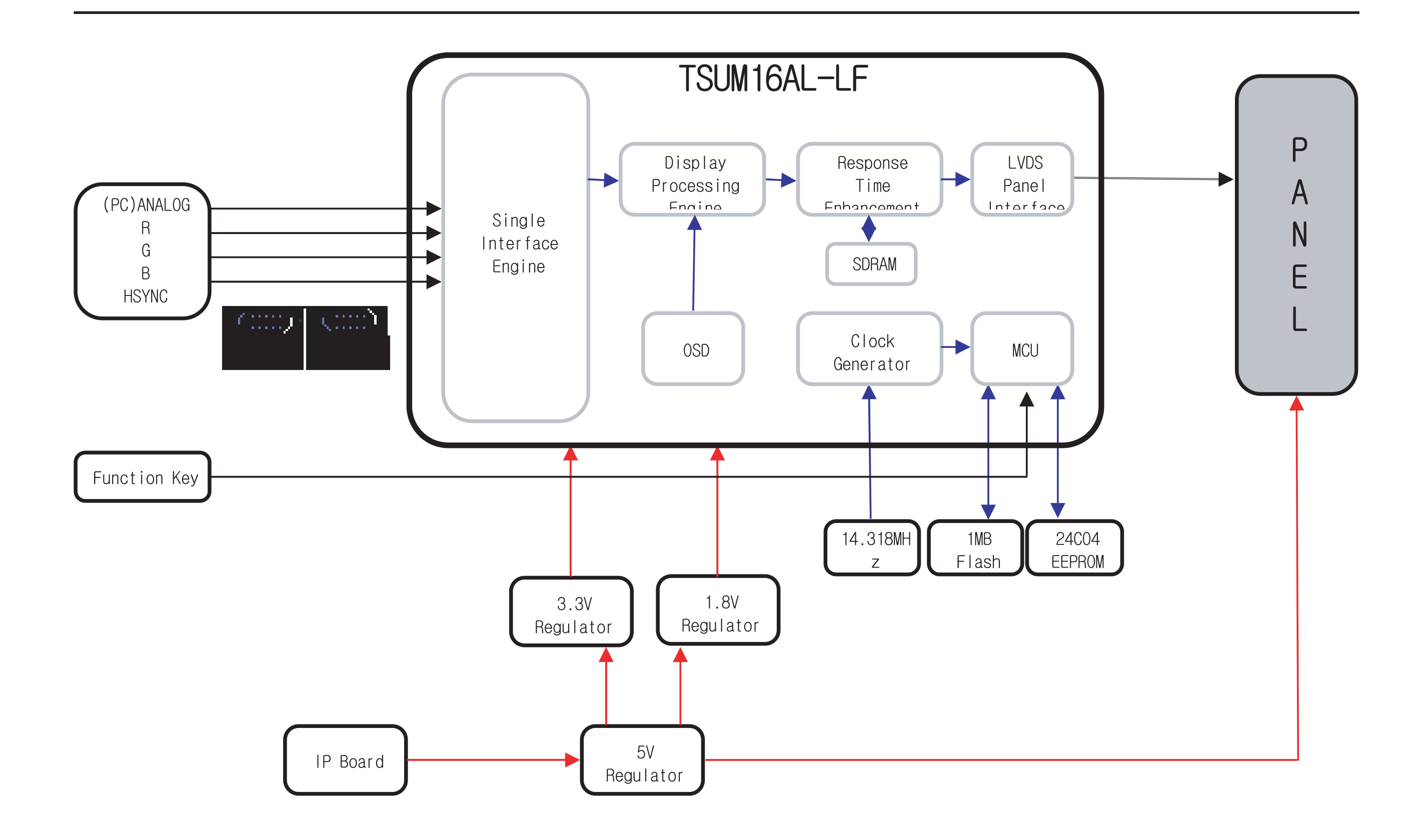
13-1-1 Power Tree



1. When the AD board is in DPMS state:
   1.1 The IP has been designed so that it operates with a power consumption of less than 0.6W of.
   1.2 The Scaler consumes power up to 37mA
   1.3 The power to the panel is switched off

2. When the AD board is operating normally:
   2.1 The maximum power consumption of the panel lamps is described below (It may vary depending on the panel manufacturer)
   17" : 4*(7.0mA*650Vrms)=4* 4.55W=18.2W
   2.2 The power consumption of the Panel Control board is as follows: 5V*645mA=3.23W
   2.3 The power consumption of the Scaler is as follows: 3.3V*204mA + 1.8V*145mA = 0.93W

13-1-2 Main board Parts



1. Inverter: A conversion device that converts DC rated voltage/current to high ones necessary for the panel lamp.

2. DC/DC(Regulator): General term for DC to DC converting devices.
The IP board receives 5V and outputs 1.8 or 3.3V that is supplied to the scaler (TSUM16AL-LF).

3. Power MosFET: The IP board receives 5V and outputs a lower voltage in DPMS mode and sup- plies the whole 5V for the panel operating board in normal conditions. In that case, the switching of Power MosFET is controlled by Micom.

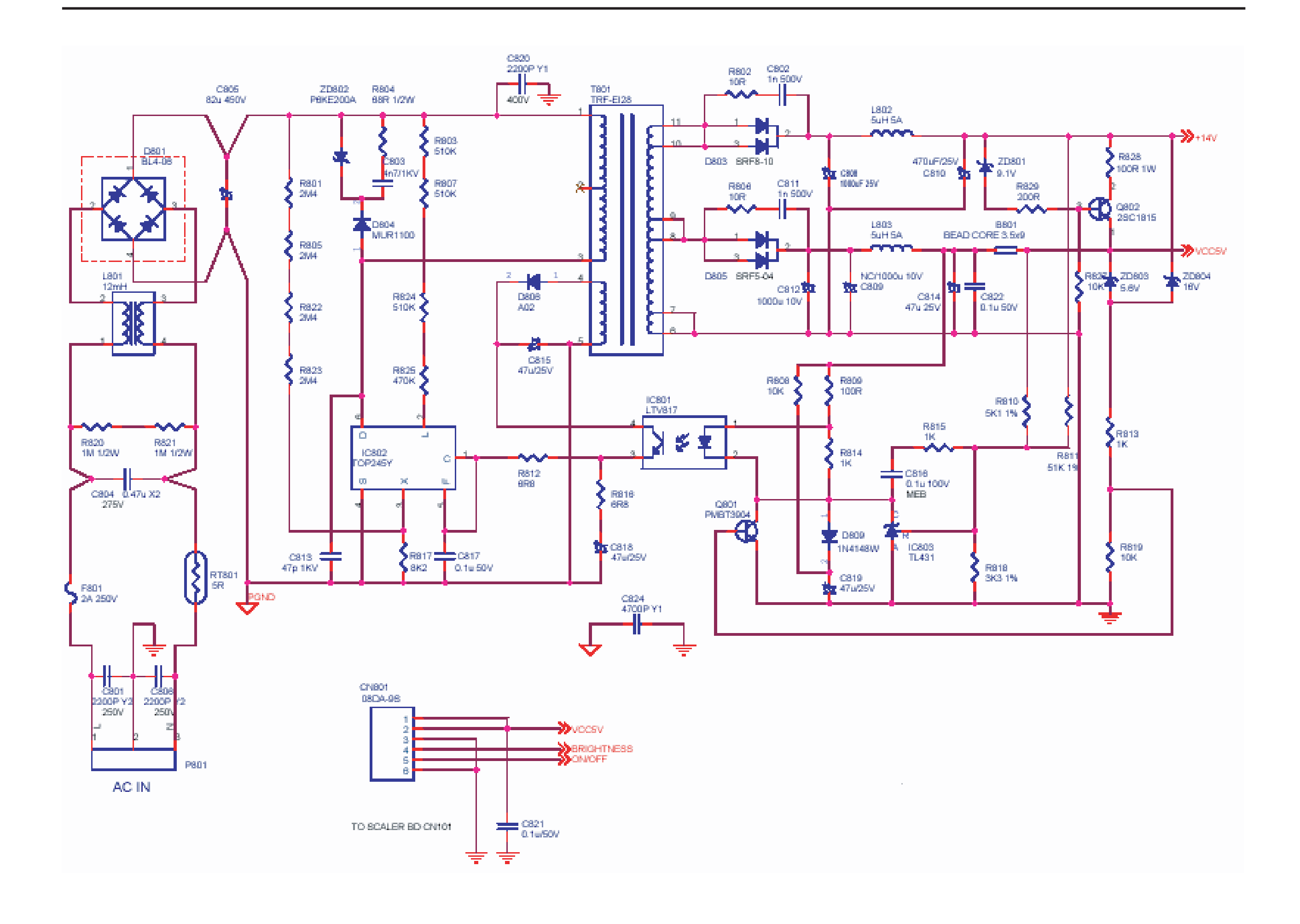
4. Scaler: Receives the analog R,G,B signals and convert them to proper reso- lutions using up- or down- scaling that are transferred to the panel in the LDVS formats.

5. Crystal(Oscillator): Use one 14.318MHz oscilla- tor externally to supply power to both MCU and Scaler at the same time.

6. Scaler & EEPROM: I2C is a two-way serial bus of two lines that supports communications across the integrated circuits as well as between FLASH and EEPROM.
In particular, MCU(TSUM16AL-LF) and use the SDR direct bus for mutual communications, which is an effective, speedy system because it allows 4 additional address/data lines com- pared to the old serial systems.

7. Function Key: A certain keystroke generates a certain electrical potential, which is transferred into ADC input port of the MCU and then con- verted to a digital value by the A/D converter of the chip. The digital value (data) is a clue to which key is entered.

13-1-3 IP Board Part(Power) Schematic Diagrams



13-2 IP BOARD part(Inverter Part)

